

view of U.S. Patent No. 5,429,361 to Raven, et al. and U.S. Patent No. 5,113,990 to Gabrius, et al.

Examiner Sager's courtesy in connection with the interview at the Patent Office on March 3, 2003 is appreciated.

In view of above amendments and the following remarks, reconsideration of the application is respectfully requested.

New Claim

Claim 85 is being added above to recite that one of the gaming apparatuses comprises a coinless slot machine. New claim 85 is supported by the statement "In the gaming apparatus of the present invention a slot machine which does not use coins is described" set forth on page 4, lines 13-14 of the application as filed in the Patent Office.

Amendments to Specification

The "Summary of Invention" paragraph that was added via the amendment mailed June 14, 2002 has been replaced with a new summary paragraph (Paragraph [0012] of the substitute specification) that is consistent with claim 77 as amended above, pursuant to 37 C.F.R. §1.73, which states that "Such summary should, when set forth, be commensurate with the invention as claimed..." Since it is believed that the subject matter of amended claim 77 is disclosed in the present application as described below, it is submitted that the paragraph noted above does not comprise new matter.

A number of additional paragraphs (Paragraphs [0013]-[0024] of the substitute specification) are being added to the "Summary of the Invention" section. Since the language being added to the "Summary" section is identical to language that appeared in the present application as filed (the language in these paragraphs was deleted in the amendment mailed June 14, 2002), it is submitted that these paragraphs do not comprise new matter.

A number of paragraphs (Paragraphs [0004]-[0007], [0010] and [0011] of the substitute specification) are being added to the "Background" section of the application. These paragraphs¹ were deleted from the "Background" section via the amendment of June 14, 2002 as being irrelevant to the then-pending claims of the present application, which did

¹ Paragraph [0011] has been slightly modified to correct what is believed to have been a typographical error. In particular, the question marks in the original paragraph have been replaced with the word "inserted."

not limit the claimed invention to a coinless system. Given the fact that dependent claim 85 (which recites a coinless slot machine) is being added above, it is believed that the paragraphs being added to the "Background" section are now relevant to claim 85.

The title of the present application has also been changed.

Information Disclosure Statement

The pages 15-18 and 20-25 that were missing from the Roulabette booklet are enclosed herewith. The undersigned representative of Applicants apologizes for any inconvenience.

New Matter Objections

In connection with the new matter objections, the Office Action states:

The original disclosure fails to support the language added to the specification and claimed 'means associated with a first of said plurality ... for printing a unique code representing an identification code' and 'means for providing a first signal responsive to said unique code printed on said permanent storage record causing generation of a second signal representing an amount of credit for play associated with said unique code.'

The two "means" recitations referred to in the above excerpt were set forth in paragraphs c. and e. of claim 77. It is respectfully submitted that paragraphs c. and e. of claim 77 are supported by the present application as originally filed in the Patent Office, that they satisfy the written description requirement and the other requirements of 35 U.S.C. §112, and that no new matter is being added.

It is well settled that the specification need not reproduce the exact language of a claim to satisfy the written description requirement of §112, first paragraph. In re Wright, 9 U.S.P.Q.2d 1649, 1651 (Fed. Cir. 1989) ("the claimed subject matter need not be described in haec verba in the specification in order for that specification to satisfy the description requirement"). The written description requirement of §112 can even be satisfied based solely on the drawings of a patent application. Vas-Cath Inc. v. Mahurkar, 19 U.S.P.Q.2d 1111, 1118 (Fed. Cir. 1991) ("These cases support our holding that, under proper circumstances, drawings alone may provide a 'written description' of an invention as required by §112").

Paragraph c. of claim 77 recites:

means associated with a first of said plurality of gaming apparatuses for printing a permanent storage record with a unique code representing an identification code.

It is respectfully submitted that paragraph c. is supported by the following excerpts of the present application as filed in the Patent Office:

The slot machine also includes a bar code printer 208 for printing cash out slips 220 having bar codes 222 on a permanent storage medium, such as paper, which is stored within the housing. (page 10, line 34 - page 11, line 1)

The printer 208 prints a bar code 222 on the cash out slips 220 responsive to the instructions from the CPU 100. The CPU 100 generates the bar code to be printed. The bar code 222 represents the monetary value of the value (sic) of the credit stored in the particular slot machine 200 on the cash out slips 220, along with a randomly generated number in order to permit the CPU 100 to verify the validity and unique identification of the cash out slip 220 at a later time. (page 11, lines 12-19)

It should be apparent from the above excerpts that the bar code represents both a monetary value and a unique identification. Although in the described embodiment the bar code represents both a monetary value and a unique identification, paragraph c. of claim 77 refers only to an identification code. There is of course no requirement that claim 77 be limited to the described embodiment. That is particularly so in a predictable art, such as in this case. In that regard, Section 2164.03 of the M.P.E.P. states "A single embodiment may provide broad enablement in cases involving predictable factors, such as mechanical or electrical elements." See also Spectra-Physics, Inc. v. Coherent, 3 U.S.P.Q.2d 1737, 1743 (Fed. Cir. 1987) ("If an invention pertains to an art where the results are predictable, e.g. mechanical as opposed to chemical arts, a broad claim can be enabled by disclosure of a single embodiment").

Paragraph e. of claim 77 recites:

means for providing a first signal to a host computer operatively coupled to said plurality of gaming apparatuses in response to reading of said permanent storage record to facilitate validation of said permanent storage record.

The present application as filed discloses a host computer that is operatively coupled to a plurality of gaming apparatuses. See Fig. 1, which shows host CPU 100 being coupled

to a plurality of slot machines 200, 200a, 200b. The host computer receives a signal from the slot machines upon reading of the permanent storage record for purposes of validating the storage record.

The following excerpt of the present application describes part of the operation of the gaming system:

Upon insertion of the cash out slip 220 into the bar code reader 206, the bar code reader 206 transmits a signal to the CPU 100 corresponding to the bar code, and the CPU 100 compares the bar code 222 on the particular cash out ticket with those stored in its memory which contains the value of the cash out slip, the unique identification, and its status. For example, the status may be "paid," in which case the cash out ticket will be considered invalid and no credit will be given for the cash out slip. (page 11, lines 21-28)

As should be apparent from the above excerpt, during operation of the gaming system a cash out slip 220 is inserted in a bar code reader 206, which reads the bar code on the cash out slip 220, and the data read from the cash out slip 220 is transmitted to the CPU 100 to allow the CPU 100 to determine whether the cash out slip 220 is valid.

It should be noted that all data, including the data read from the cash out slip 220, is transmitted to the host CPU 100 via an interface, which is described in the following excerpts of the present application:

Each individual slot machine includes a commercially available Universal Interface Board (UIB) that collects the slot machine data, such as the codes from the bar codes and the output of the paper currency reader and formats it and then transmits it to the CPU. The CPU is located in a secured office at the casino. (page 4, line 31 - page 5, line 3)

The CPU 100 is fed signals generated by the Universal Interface Board (UIB) 400 which acts as the interface between the slot machine 200 and the CPU 100. The UIB is a commercially available interface which is widely used in the gaming industry to control the operation of existing stand-alone electronic gaming apparatus. In the preferred embodiment of the present invention, the Universal Interface Board is sold by Five Star Solutions, Inc. (page 13, lines 23-29)

The UIB consists of an electronic chip which collects all of the slot machine data, organizes and formats it, and then transmits the organized data to the CPU 100. (page 13, lines 30-32)

In view of the foregoing, it should be apparent that the present application discloses a means, in the form of an interface, that provides a signal to a host computer in response to reading of a permanent storage record to facilitate validation of the permanent storage record, as recited in paragraph e. of claim 77 and that paragraph e. is fully supported by the specification.

A new matter objection was made based on the omission of the passage "cash out slip is augmented by a unique control number randomly generated by the CPU in a well known manner" from the "Summary of Invention" section of the application. The "cash out slip..." passage noted in the Office Action that was deleted from the "Summary of Invention" section of the application was part of a sentence which is reproduced below in its entirety:

The bar code representing the value of the free play coupon or cash out slip is augmented by a unique control number randomly generated by the CPU in a well known manner.

It should be noted that the "Detailed Description of the Drawings" section of the present application still contains the following sentence, at page 11, lines 14-19 of the original application:

The bar code 222 represents the monetary value of the value of the credit stored in the particular slot machine 200 on the cash out slips 220, along with a randomly generated number in order to permit the CPU 100 to verify the validity and unique identification of the cash out slip 220 at a later time.

It is respectfully submitted that the two sentences reproduced above are substantially the same in substance. Consequently, it is believed that the omission of the "cash out slip..." passage from the "Summary of Invention" section does not violate the prohibition on new matter. In any event, the "cash out slip..." passage is being re-added to the present application.

Written Description Rejection

As set forth above, since claim 77 is supported by the present application as filed in the Patent Office, it is respectfully submitted that the written description rejection is not applicable.

Enablement Rejection

As set forth above, since claim 77 is supported by the present application as filed as described above, it is respectfully submitted that the enablement rejection is not applicable.

Art Rejections

As amended, claim 77 is directed to a gaming system having, inter alia, a plurality of gaming apparatuses, means associated with a first of the gaming apparatuses for printing a permanent storage record with a unique code representing an identification code, a reader associated with a second of the gaming apparatuses that is capable of reading the permanent storage record that was printed by the printing means associated with the first gaming apparatus, and means for providing a first signal to a host computer operatively coupled to the gaming apparatuses in response to reading of the permanent storage record to facilitate validation of the permanent storage record, whereby the permanent storage record printed by the printing means of the first gaming apparatus can be read by the reader associated with the second gaming apparatus and credit can be authorized for play of the second gaming apparatus.

Sarbin, et al.

The Sarbin, et al. patent discloses a system having a plurality of gaming machines 10 (Fig. 1) and a central data processor 82 (Fig. 4) in which data communication takes place by way of a portable data unit in the form of a smart card 20 (Fig. 2) that is physically carried by a player between the gaming machines 10 and the central data processor 82. See, for example, column 5, lines 60-63; column 6, lines 16-18; and column 7, lines 28-33.

It is respectfully submitted that there are at least two features recited in claim 77 as amended that are not disclosed in the Sarbin, et al. patent.

First, the Sarbin, et al. patent does not disclose a host computer that is “operatively coupled to a plurality of gaming apparatuses” as recited in claim 77. It is submitted that the central data processor 82 of Sarbin, et al. is not “operatively coupled to” the Sarbin, et al. gaming machines 10. It is believed that the only way data can be transferred among the gaming machines 10 and the central data processor 82 disclosed by Sarbin, et al. is by the use of the smart cards 20. While a gaming machine 10 might be considered to be “operatively coupled to” a smart card 20 when the smart card 20 is inserted into that gaming machine 10, it is respectfully submitted that there is no time at which a gaming machine 10 is operatively coupled to the central data processor 82 since a smart card 20 cannot simultaneously be

inserted into both a gaming machine 10 and the central data processor 82.

Second, the Sarbin, et al. patent does not disclose “means for providing a first signal to a host computer operatively coupled to said plurality of gaming apparatuses in response to reading of said permanent storage record to facilitate validation of said permanent storage record” as recited in claim 77.

As noted above, the central data processor 82 of Sarbin, et al. is not operatively coupled to the gaming machines 10, and the transfer of data in the Sarbin, et al. system occurs exclusively by a player physically transporting the card 20 between the gaming machines 10 and the central data processor 82. Thus, it is respectfully submitted that the gaming machines 10 do not have means that provide signals to the central data processor 82 of Sarbin, et al. It is the player that accomplishes the transfer of data between the gaming machines 10 and the central data processor 82.

It is respectfully submitted that gaming system recited in claim 77 would not have been obvious in view of Sarbin, et al. since Sarbin, et al. teach away from the gaming system recited in claim 77. In particular, it is submitted that the following excerpts from the Sarbin, et al. patent clearly teach that it is undesirable to have a gaming system in which the gaming machines are coupled to a central computer:

Another important function of gaming machine data transfer systems is to provide accounting and security information to casino operators. Most of these applications have in the past required the gaming machines to be directly connected to the central computer. Examples of such gaming machine data transfer systems are provided in U.S. Pat. Nos. 4,072,930, 4,283,709 and 4,636,951. This usually entails a large computer equipment installation, and the installation of an extensive network of data communication cables and associated equipment. And, since the central computer is usually connected to a large number of gaming machines, in some cases up to 2000 or more machines in a real time data communication configuration, a powerful and hence expensive central computer is required. Another disadvantage of these systems arises from the fact that the distance that the data can be transmitted is usually, as a practical matter, limited, thus the central computer is usually restricted to the same premises as the gaming machines. As a result, these electronic gaming machine information systems tend to be limited to gaming operations where a relatively large number of machines are located in close proximity to each other. (column 1, lines 39-61)

It is therefore an object of the invention to provide a player or employee carried data unit along with a gaming machine interface that will permit the transmittal of player information and gaming machine information between gaming machines and a central data system. (column 2, lines 10-14)

Another very significant advantage of the invention relates to the fact that the function of the large central computer system can be replaced by a smaller minicomputer, or in some cases by one or more desktop personal computers. Since the need for real-time on-line communication with all the game machines does not exist in this application, the data processing functions of the system can be handled easily by the smaller computer system. Also, since the communication of data from the game machines to the computer system is not limited by a network of data communication cables, game machines need not be on the same premises as, or even in the near vicinity of, the computer system. (column 2, line 62 - column 3, line 6)

A further advantage of the invention flows from the elimination of the data communication hardware and the large central computer as discussed above so that the automation of the accounting, security, and player tracking functions can now be made available even to very small establishments and to operators that have small numbers or widely dispersed gaming machines which could not otherwise justify the cost of such a system. (column 3, lines 7-15)

Thus, it is respectfully submitted that, when the prior art is considered as a whole, including the above excerpts that teach away from the system recited in claim 77, it would not have been obvious to modify the particular gaming system disclosed in the Sarbin, et al. patent to achieve the gaming system recited in claim 77.

It is respectfully submitted that the dependent claims of the present application also would not have been obvious in view of the Sarbin, et al. patent for at least the reasons noted above.

Chadwick, et al.

The Chadwick, et al. patent is considered to be less relevant since the Chadwick, et al. patent does not appear to disclose a gaming system having a plurality of gaming machines operatively coupled to a host computer, and it is respectfully submitted that claim 77 patentably distinguishes over the Chadwick, et al. patent for the reasons noted above in connection with Sarbin, et al.

It is respectfully submitted that the dependent claims of the present application also would not have been obvious in view of the Chadwick, et al. patent for at least the reasons noted above.

Conclusion

In view of the foregoing, it is respectfully submitted that the above application is in condition for allowance. If there is any matter that the Examiner would like to discuss, he is invited to contact the undersigned representative at the telephone number set forth below.

Respectfully submitted,

MARSHALL, GERSTEIN & BORUN

Date: March 10, 2003

By: Martin J. Hirsch

Martin J. Hirsch
Registration No. 32,237
6300 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606-6357
(312) 474-6300

CLAIM AMENDMENTS MADE

77. (Twice Amended) A gaming system that pays credits responsive to an outcome of a game played comprising:

- a. a plurality of gaming apparatuses [apparatus];
- b. an electronic memory storing an amount of credit available for play[, said amount of credit being determined by an outcome of at least one of said plurality of gaming apparatus played];
- c. means associated with a first of said plurality of gaming apparatuses [apparatus] for printing [a unique code on] a permanent storage record with a unique code representing an identification code;
- d. a [code] reader associated with a second of said plurality of gaming apparatuses [apparatus], said [code] reader being capable of reading [said unique code on] said permanent storage record that was printed by said printing means associated with said first of said plurality of said gaming apparatuses [apparatus]; and
- e. means for providing a first signal to a host computer operatively coupled to said plurality of gaming apparatuses in response to reading of said permanent storage record to facilitate validation of said permanent storage record [responsive to said unique code printed on said permanent storage record causing generation of a second signal representing an amount of credit for play associated with said unique code printed on said permanent storage record];

whereby said permanent storage record printed by said printing means associated with said first of said plurality of gaming apparatuses [apparatus] can be read by said [code] reader associated with said second of said plurality of gaming apparatuses [apparatus] and credit can be authorized for play of said second of said plurality of gaming apparatuses [apparatus].

7 85. (New) A gaming system as defined in claim ~~77~~⁷⁷, wherein one of said gaming apparatuses comprises a slot machine and wherein said slot machine comprises a coinless slot machine.



Substitute Specification Mailed March 2003
Version Showing Changes Made

GAMING SYSTEM WITH READER AND CODE PRINTER

5

[COINLESS SLOT MACHINE SYSTEM AND METHOD]

[0001] This application is a continuation of application Serial No. 08/007,742, filed January 22, 1993, which is incorporated herein by reference.

10

BACKGROUND

[0002] At the current time, gaming apparatus, including slot machines, pinball machines and other coin-operated games, typically use coins to operate the machines. The coins are inserted in a slot in the gaming apparatus and the player then operates the gaming apparatus based on the value of the coins deposited. Some gaming apparatus, rather than dispensing the player's winnings after each play, store the value of the winnings and indicate the remaining "credit" of the player. When the player wishes to stop playing, the coins are then dispensed into an external tray of the gaming apparatus. While the present invention is described in relationship to a slot machine, the term "slot machine" is used to denote any gaming apparatus that receives money in some form and pays out money or credits.

20

[0003] In some instances, such as when the amount of the winnings exceeds the stored coins within the slot machine, an attendant is notified that additional payment is necessary.

[0004] The use of coins in the casino operation for the playing of slot machines has presented a great number of well-known problems that over the years casinos have attempted to eliminate. These problems, among others, are: (1) coins take up a lot of space and have to be frequently emptied from the slot machine, requiring the play of the slot machine to be interrupted; (2) a security guard is required to be present, together with someone to physically move the coins to a central location; (3) the coins then have to be separated, counted, stored and rolled for reuse; (4) coins are heavy and bulky. The amount collected in a typical day at an average casino may weigh more than two tons; (5) coins are dirty; and (6) coins required to operate slot machines represent an inventory (working capital) need of several million dollars.

30

Each of the above tasks takes a substantial amount of time, resources, and costs money. The collecting, counting and depositing of the coins may involve dozens of people.

5 [0005] In addition to the problems with the physical collection of the coins, there are additional problems associated with the operation of slot machines which use coins. The coins take up a lot of space within the slot machines and the slot machines must be designed so as to incorporate space for storing the coins. The use of coins to play slot machines involves a great number of transactions, including getting change for paper currency. This requires numerous change attendants to constantly walk
10 around near the slot machines so that the players do not have to leave the machines. Also containers have to be given to the players for carrying the coins to and from the slot machines. Paper wrappers from the coins are thrown on the ground near the slot machines. Also coins have to be counted by the change attendants after the players stop playing.

15 [0006] There are slot machines that accept coupons or accept paper currency. However, such slot machines also accept coins.

[0007] To overcome some of the above disadvantages in using coins for slot machines, there have been a number of attempts to devise a system of money-free slot machines.

20 [There have been a number of attempts to devise a system of money-free slot machines.]

[0008] The principal approach has been to use some form of credit card or debit card having a user identification code that is inserted into the slot machine, and by use of a central processing unit the identification of the user and the amount of credit
25 available to the user is controlled. A debit card is a card issued by a casino based on a prior cash deposit by the player, much in the same way used in some modem subway systems.

[0009] One system uses credit or debit cards having a magnetic strip representing a predetermined value, which can be read by a slot machine equipped with a credit card
30 reader, in place of money. The credit card reader is connected to a central processing unit that determines the value of the card and the value of play.

[0010] While the above systems avoid the use of money, they are susceptible to certain abuses which have made them generally unacceptable to the casino industry. Predetermined credit or debit cards are inconvenient and require the casino to establish credit limits for the user, and are susceptible to counterfeiting or use by an
5 unauthorized person. Some identification or other means of assuring the validity of the cards or user is necessary. As a result, these systems do not permit the user to treat the predetermined credit cards as though the cards were money. This changes the gambling habits of the player, which is undesirable.

[0011] In the patent to Kapur, U.S. Pat. No. 5,119,295 a lottery ticket dispensing
10 apparatus is disclosed which operates by use of paper currency, credit cards or pay slips. The player obtains a pay slip upon payment of money. The pay slip is coded and can then be inserted into its lottery gaming apparatus. The apparatus prints out a lottery ticket, but has no means for printing any slip corresponding to a winning lottery ticket.

15 SUMMARY OF INVENTION

[In one aspect, the invention is directed to a gaming system that pays credits responsive to an outcome of a game played comprising a plurality of gaming apparatus; an electronic memory storing an amount of credit available for play, said amount of credit being determined by an outcome of at least one of said plurality of
20 gaming apparatus played; means associated with a first of said plurality of gaming apparatus for printing a unique code on a permanent storage record representing an identification code; a code reader associated with a second of said plurality of gaming apparatus, said code reader being capable of reading said unique code on said permanent storage record that was printed by said printing means associated with said
25 first of said plurality of said gaming apparatus; and means for providing a first signal responsive to said unique code printed on said permanent storage record causing generation of a second signal representing an amount of credit for play associated with said unique code printed on said permanent storage record; whereby said permanent storage record printed by said printing means associated with said first of
30 said plurality of gaming apparatus can be read by said code reader associated with

said second of said plurality of gaming apparatus and credit authorized for play of said second of said plurality of gaming apparatus.]

[0012] The independent claim of this patent is directed to a gaming system that pays credits responsive to an outcome of a game played comprising: a plurality of gaming apparatuses; an electronic memory storing an amount of credit available for play; means associated with a first of the plurality of gaming apparatuses for printing a permanent storage record with a unique code representing an identification code; a reader associated with a second of the plurality of gaming apparatuses, the reader being capable of reading the permanent storage record that was printed by the printing means associated with the first of said plurality of the gaming apparatuses; and means for providing a first signal to a host computer operatively coupled to the plurality of gaming apparatuses in response to reading of the permanent storage record to facilitate validation of the permanent storage record, whereby the permanent storage record printed by the printing means associated with the first of the plurality of gaming apparatuses can be read by the reader associated with the second of the plurality of gaming apparatuses and credit can be authorized for play of the second of the plurality of gaming apparatuses.

[0013] In the gaming apparatus of the present invention a slot machine which does not use coins is described. Slot machines are typically activated initially by the insertion of coins into the slot machine through a slot, thus the origin of the name "slot machine."

[0014] In the present invention no coins are inserted into the slot machine. The slot machine of the present invention includes an optical paper currency reader that is capable of recognizing and validating paper currency and providing the player with the credit corresponding to the value of the currency.

[0015] The slot machine of the present invention also includes a bar code reader that can read and validate pre-printed free play coupons, or printed cash out slips previously printed by the gaming apparatus with a bar code representing the value of the coupon or cash out slip. The slot machine also includes a printer that prints and dispenses cash out slips having the value of the cash out slip represented by a bar code. The printer is controlled by a Central Processing Unit (CPU) associated with the slot machine.

[0016] Each individual slot machine includes a commercially available Universal Interface Board (UIB) that collects the slot machine data, such as the codes from the bar codes and the output of the paper currency reader and formats it and then transmits it to the CPU. The CPU is located in a secured office at the casino. The
5 printed cash out slips can be accepted by the slot machines in order to obtain credit to play the slot machine or can be inserted or scanned into a separate device at a change station to obtain actual currency.

[0017] The bar code representing the value of the free play coupon or cash out slip is augmented by a unique control number randomly generated by the CPU in a well-
10 known manner. When the coupon or cash out slip is put into the bar code reader, the CPU verifies the validity of the individual coupons and cash out slips by verifying the unique control number. Additionally, control numbers for free play coupons can be generated externally and then entered into the CPU as a valid code.

[0018] The use of the above system in association with electronic gaming machines
15 eliminates the necessity of having slot machines dedicated to a particular amount of wager. At the present time, the typical casino has slot machines that are dedicated to accept only one value of coin. For example, a slot machine may be a 25 cent machine, accepting only quarters; a 5 cent machine; or a dollar machine. It is very time consuming to physically change the slot machine, which may be desirable during
20 a major event or New Years Eve, when slot machines having higher wager limits are desirable. By use of the subject system, it is possible to change the wager limits of any or all of the individual slot machines. Thus, the minimum wager of the slot machine can be changed at any time. It would also be possible to allow the player to select the wager limit.

[0019] This permits the casino operators to increase the usefulness of the slot
25 machines to the casino. Previously one player desiring high wager limits than a companion would have to be separated, since the higher limit machines would be separated from the lower limit machines. The current system permits high limit machines to be next to lower limit machines, since all machines can have the values
30 selected by the player.

[0020] Customers playing machines of different wagering limits may elect to participate in common jack pot. This will eliminate progressive carrouseles from competing against themselves within the casino.

5 [0021] Another feature of the present invention that is advantageous to the casino is the tracking of the amount of use of the slot machines by a particular player. This is important to a casino which frequently provides perks to customers that use the casino to a significant extent. If the amount of dollars that are being played by a player is desired to be tracked, the player can insert a room key, which in the preferred embodiment is in the form of a card which has a magnetic code on it, into the slot
10 machine which would serve to identify the player. The CPU would then store the amount of play, time and/or money, and/or the individual player. The CPU would stop tracking the individual player when a cash out slip was generated. This system provides a complete accounting of customer accounts. Since the room key or card is only used for the identification of the player and not for providing credit, the
15 security difficulties and interference that is experienced with the other proposals described above are not encountered. If no room key or the like is inserted, the slot machine still operates, but the player is not tracked. Other player identification means besides a room key could be used, such as providing a special identification card to the player, or having a key pad or the like with the player inserting his identification
20 code. Once a player has inserted an identification card into a slot machine, that player can then be tracked by the insertion of any cash out slip generated by the slot machine for that player. The player would not have to insert the identification card into a slot machine as long as the player had a cash out slip.

[0022] At separate locations from the slot machines would be a "Cashiers Station"
25 controlled by the CPU. The Cashiers Stations would not have any gaming function. In the preferred embodiment of the present invention, the Cashiers Station would pay players the value of the cash out slips. However, it is possible for the Cashier Station to provide cash tickets for use in the slot machines in exchange for currency credit card or other cash equivalents. Normally players would deposit paper currency
30 directly into the slot machine and receive a cash out slip for the unused portion and/or winnings at the end of play. In another alternative embodiment, if a player only had coins available, then the Cashiers Station would permit the player to convert the coins

to a cash out slip that could be deposited into the slot machine. Having the Cashier Station accept coins from the players would limit the collection of coins to limited locations. Also, since the slot machines would be accepting paper currency directly, many less coins would be deposited in the Cashier Station. The Cashier Station also
5 could accept cash out slips and dispense currency by an automatic money dispenser. Some ATM devices instead of dispensing cash will dispense coupons.

[0023] The above described system overcomes the disadvantages of the prior cashless systems. The concern over counterfeiting of individual cash out slips is eliminated because the CPU will be able to keep track of the unique random number
10 for each cash out slip or coupon. When a cash out slip or coupon is entered into the bar code reader, the CPU will determine the validity of the code, and if invalid for any reason, such as it already having been used or cashed, the CPU would not give any credit for the cash out slip or coupon and a silent alarm would be used to alert security personnel to go to the specific slot machine when an invalid code was attempted to be
15 used.

[0024] In effect, the system of the present invention permits the player to use the gaming machines in exactly the same manner as if the player was using money. This means that the player does not have to change any playing habits, a very significant factor.

20 BRIEF DESCRIPTION OF THE DRAWINGS

[0025] Fig. 1 is a diagrammatic block diagram of the system of the present invention;

[0026] Fig. 2 is an exemplar of a typical cash out slip from the gaming apparatus of the present invention;

25 [0027] Fig. 3 is an exemplar of a coupon capable of being used with the gaming apparatus of the present invention;

[0028] Fig. 4 is an exemplar of a jackpot winner cash out slip from the gaming apparatus of the present invention; and

[0029] Figs. 5a and 5b are exemplars of typical menu screens capable of being
30 displayed with the gaming apparatus of the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

[0030] Referring to Fig. 1, the block diagram of the components of the invention are shown. The system 10 comprises components all of which are currently available from existing technology. The system itself is referred to as a coinless gaming system and is referred to generally by reference 10.

[0031] The coinless gaming system is controlled by a host central processing unit (CPU) 100 consisting of a stand-alone computer having all of the conventional attributes of a general-purpose computer. In the preferred embodiment a status brand fault-tolerant computer is used. The CPU 100 is connected to a series of gaming apparatus, such as slot machines 200, 200a . . . n. The play of the slot machine 200 is controlled by internal game software 202 with preset parameters for the play of the game. In the preferred embodiment the desired game to be played is selected from a touchscreen-operable menu (shown in Figs. 5a and 5b) whereby the player can select the particular game that the player wishes to play, as well as other options, such as the amount of the wager. For example, the menu may provide the player with the options of playing blackjack, conventional slots, poker, horse racing, roulette, or any other game available on software. The player can also select the amount of the wager, for example in units of 25 cents, \$1.00 or any other amount permitted by the menu. The technology for touch screen menu-driven devices is known. Such touch screen of the present invention is sold commercially by Video Gaming Technology, Inc. and others. The CPU 100 controls the various menu-driven options, such as game selection and amount of the wager for the game.

[0032] The slot machine 200 includes a first input means in the form of a paper currency reader 204. The paper currency reader provides a signal to the CPU 100 indicating that it is valid currency and value of the currency. The CPU then authorizes the appropriate credit to the gaming apparatus. The paper currency reader 204 is well known in the trade and is commercially available from numerous companies, including J.C.M.

[0033] While in the preferred embodiment the paper currency reader 204 will be limited to United States paper currency, it is possible to have several different paper currency readers or one reader that recognize a variety of international currencies.

The CPU 100 can have the current exchange rates for purposes of determining the credit available to the player.

[0034] The slot machine 200 has a second input means in the form of a bar code reader 206. The operation of bar code readers is well known and in the preferred embodiment a bar code reader commercially available from Triad is used. While in the preferred embodiment the bar code is inserted in the form of a permanent storage means, such as on a paper cash out slip, such as shown in Fig. 2, or free play coupon shown in Fig. 3, or Jackpot pay out ticket shown in Fig. 4, each of which has a bar code on the ticket for reading by the bar code reader, it is recognized that other forms of codes can be used in its place, such as coded magnetic strips on plastic cards.

[0035] While in most cases the free play coupons will be in the form of a monetary value, preprinted free play coupons not having money values associated with them, but other forms of play are possible. For example, the coupon may be used to permit the player to compete in a contest for the best hand in a casino wide poker contest, or other promotional purposes.

[0036] In the preferred embodiment, the paper currency reader 204 and the bar code reader 206 are located within the housing of the slot machine 200 so that the free play coupons, cash out slips and paper currency are all entered within a single slot and stored on top of each other in a single lock box that would be removable from the slot machine by authorized personnel. However, it is also possible to have the paper currency deposited in a separate slot from the free play coupons or cash out slips and stored separately.

[0037] The slot machine also includes a bar code printer 208 for printing cash out slips 220 having bar codes 222 on a permanent storage medium, such as paper, which is stored within the housing. In addition to the bar code, the cash out slip 220 may also contain other information such as the date 224 of the print out of the cash out slip 222. A simple roll of preprinted cash out slips should be sufficient to generate from 400 to 800 cash out slips. A sensor can signal the CPU 100 when only ten percent (10%), or some other amount, of the coupons are remaining so that the paper can be changed. The printer 208 prints a bar code as directed by the CPU 100. Such printers are well known. In the preferred embodiment of the present invention the bar code printer 208 is commercially available from Star Micronics.

[0038] The printer 208 prints a bar code 222 on the cash out slips 220 responsive to the instructions from the CPU 100. The CPU 100 generates the bar code to be printed. The bar code 222 represents the monetary value of the value of the credit stored in the particular slot machine 200 on the cash out slips 220, along with a
5 randomly generated number in order to permit the CPU 100 to verify the validity and unique identification of the cash out slip 220 at a later time. This is necessary since the bar code cash out slip 220 is capable of being inserted as an input into the bar code reader 206. Upon insertion of the cash out slip 220 into the bar code reader 206, the bar code reader 206 transmits a signal to the CPU 100 corresponding to the bar code,
10 and the CPU 100 compares the bar code 222 on the particular cash out ticket with those stored in its memory which contains the value of the cash out slip, the unique identification, and its status. For example, the status may be "paid," in which case the cash out ticket will be considered invalid and no credit will be given for the cash out slip. Since the CPU 100 has randomly generated the unique identification, a cash out
15 ticket can receive credit only once. The options available if the code is invalid are: (1) the slot machine will merely reject the cash out slip if it does not have any readable code, such as would be the case if it was blank paper; or (2) if there is a readable bar code, but one that is an invalid code, security will be called.

[0039] In an alternative embodiment of the present invention, when paper currency,
20 a cash out slip or a free play coupon is inserted as an input into a slot machine 200, a status indicator in the form of a visual display of the amount of the value of the ticket, currency or free play coupon will appear on the screen, as shown in Fig. 5; with a query to the player to verify that this is the right amount. If it is not the right amount or there is some other error, then the player would be directed to call an attendant.

[0040] A third input to the CPU can be a player identification code reader 210
25 which is capable of reading a room key or specially encoded identification card, such as one having a magnetic strip, for identifying the player using the slot machine 200. This identification card is intended to permit the CPU 100 to keep track of the player and the amount of time and/or money played by the identified player. The
30 identification card is not intended to provide the player with credit so the concern over the security of the card is not significant, as would be the case if the identification

card provided the player with credit or was used to store the amount of winnings of the card holder.

[0041] The identification card reader 210 input can also be a key pad which the player would use to enter a number or some other means of identification. Such key pads are well known and are commercially available.

5 [0042] Also associated with the CPU 100 are one or more change stations 300, 300a . . . n or convenient ATM 500, 500a . . . n devices which instead of dispensing cash, generate a coupon usable with the slot machines 200. In the preferred embodiment, the change station 300 consists of a second bar code reader 304 that
10 accepts cash out slips 222. The validity of the cash out slip 222 is verified by the CPU 100, and if valid, paid for by the attendant. Other security devices, such as holograms and the like that can be visually inspected to provide further security may be employed as well.

[0043] In an alternative embodiment, the change station can be more automated.
15 The change station 300 in an alternative embodiment consists of a second paper currency reader 302, a second bar code reader 304, and a second bar code printer 306 for printing bar codes on a permanent storage medium. The second currency reader 302, second bar code reader 304, and second bar code printer 306 are the same as used in the slot machine 200. The change station 300 also includes a currency
20 dispenser 308 so that when a cash out slip 222 is inserted into the bar code reader 306, then paper currency and coins can be dispensed directly to the user. In an alternative embodiment, a coin receiver is capable of accepting coins from a player in order to print cash out slips having a bar code, in the same manner that the slot machine 200 would print out cash out slips, that could be used with the slot machines 200.

25 [0044] As is the case with the slot machine 200, in the event that a cash out slip 222 is inserted into the bar code reader 304, the CPU 100 will validate the cash out slip 222 by making sure that it had not already been paid or otherwise valid. If it is valid then the currency would be paid out by the change station attendant. The attendant could be advised of the amount of currency to be paid to the player by a monitor
30 display or a receipt printer, such is used in cash registers. Such receipt printers are well known.

[0045] The CPU 100 is fed signals generated by the Universal Interface Board (UIB) 400 which acts as the interface between the slot machine 200 and the CPU 100. The UIB is a commercially available interface which is widely used in the gaming industry to control the operation of existing stand-alone electronic gaming apparatus.

5 In the preferred embodiment of the present invention, the Universal Interface Board is sold by Five Star Solutions, Inc.

[0046] The UIB consists of an electronic chip which collects all of the slot machine data, organizes and formats it, and then transmits the organized data to the CPU 100. The UIB 400 also acts as a controller for the operation and functions of the bar code reader 206, the printer 208, the paper currency reader 204, the player identification
10 input and other peripherals associated with the slot machines. The UIB 400 is capable of being changed by the CPU 100 to alter any of its functions. Standard computer programming, such as is well known to computer programmers in the gaming industry, is used to select the particular parameters designed to be employed in the
15 operation and control of the UIB 400 and the CPU 100.

[0047] While in the preferred embodiment, printed bar codes are used as the encoding means, it is also possible to use other coding means, such as magnetic codes on magnetic strips on plastic cards. The cards would be treated the same as cash out
20 slips, but would require magnetic code readers and magnetic code generators rather than bar code readers and bar code printers.

[0048] While the present invention has been described in detail with regards to the preferred embodiment, it is appreciated that other variations of the present invention may be devised which do not depart from the inventive concept of the present invention.